

Lesson 11-8

Graphing in the Coordinate Plane

Lesson Objective

To name and graph points on a coordinate plane

NAEP 2005 Strand: Algebra

Topic: Algebraic Representations

Local Standards: _____

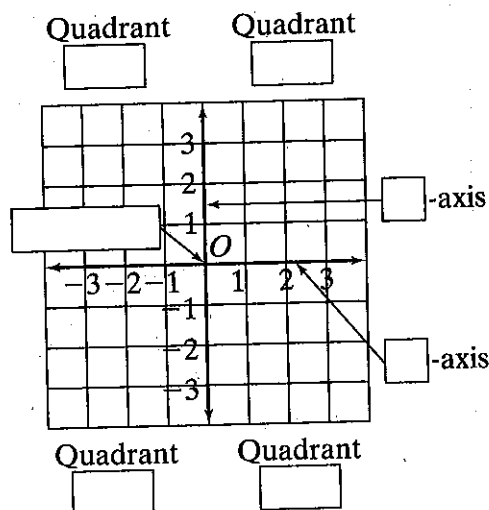
Vocabulary

The coordinate plane is _____

The plane is divided into four regions, called _____.

The origin is _____

An ordered pair is _____



Example

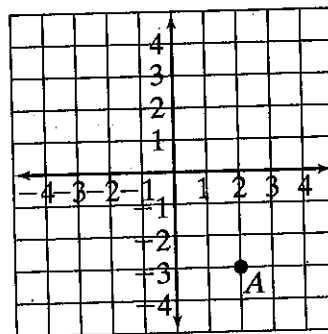
1 Naming Coordinates Find the coordinates of point A.

Point A is _____ units to the _____ of the y-axis.

The x-coordinate is _____.

Point A is _____ units below the x-axis. The y-coordinate is _____.

The coordinates of point A are _____.



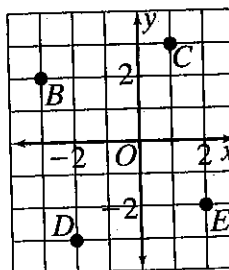
Quick Check

1. Find the coordinates of each point in the coordinate plane.

a. B _____

b. D _____

c. E _____



Examples

- ② **Graphing Ordered Pairs** Graph point $X(-1, -3)$ on a coordinate plane.

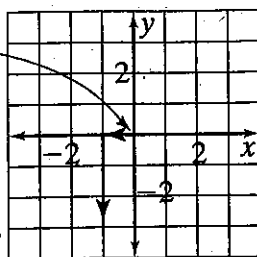
Step 1

Start at the

Step 2

Move unit

to the .

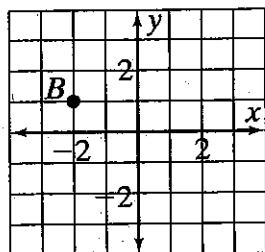


Step 3

Move

units .

- ③ **Using Map Coordinates** Use the coordinate grid. If you travel 2 units down and 3 units right from B , what are the coordinates of your location?

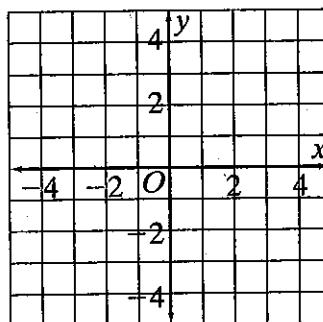


You are at .

Quick Check

2. Graph these points on the coordinate plane:

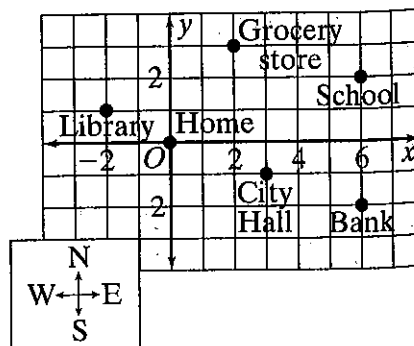
- $A(1, 3)$
- $B(-3, 2)$
- $C(-4, -4)$



3. Use the map at the right. Suppose you leave the library and walk 2 blocks south and then 5 blocks east.

- a. At which building do you arrive?

- b. What are the coordinates of the building?



Practice 11-8

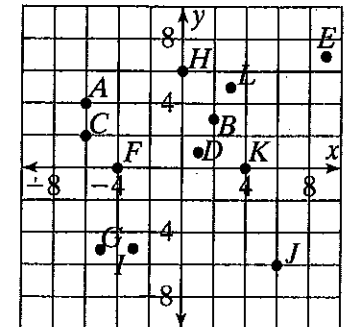
Graphing in the Coordinate Plane

Name the point with the given coordinates in the coordinate plane at the right.

1. $(2, 3)$ _____
2. $(-4, 0)$ _____
3. $(-3, -5)$ _____
4. $(0, 6)$ _____

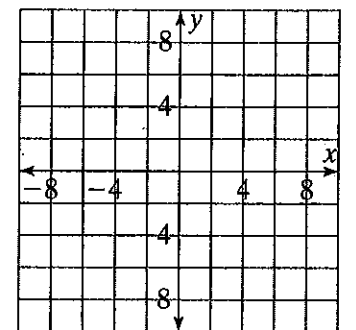
Find the coordinates of each point at the right.

5. J _____
6. E _____
7. D _____
8. A _____
9. G _____
10. C _____



Graph each point on the coordinate plane at the right.

11. $A(8, -4)$
12. $B(-4, 8)$
13. $C(4, 8)$
14. $D(-8, -4)$
15. $E(8, 4)$
16. $F(-4, -8)$
17. A taxi begins at $(4, -3)$. It travels 3 blocks west and 5 blocks north to pick up a customer. What are the customer's coordinates?



18. A moving truck fills up a shipment at an old address, at $(-2, 1)$. It travels 7 blocks south and 6 blocks east to the new address. What is the location of the new address?

Use the coordinate plane at the right.

19. Graph four points on the coordinate plane so that when the points are connected in order, the shape is a rectangle. List the coordinates of the points.
20. Graph four points on the coordinate plane so that when the points are connected in order, the shape is a parallelogram that is not a rectangle. List the coordinates of the points.

